

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method for routing message to a short message service center (SMSC) in a network including a plurality of SMSCs, the method comprising:
  - (a) receiving a message having a signaling connection control part and a mobile application part, the mobile application part having ~~an originating a~~ mobile identification number (MIN) of an originating handset;
  - (b) determining an entity type for the message based on the signaling connection control part;
  - (c) in response to determining that the entity type indicates that the message is destined for an SMSC, performing a lookup in an address translation database using the ~~originating MIN~~ of the originating handset from the mobile application part of the message to locate an address for one of the SMSCs in the network; and
  - (d) in response to locating the address, routing the message based on the address.
2. (Original) The method of claim 1 wherein performing a lookup in an address translation database includes performing a lookup in a database indexed by single mobile identification numbers.
3. (Original) The method of claim 1 wherein performing a lookup in an address translation database includes performing a lookup in a database indexed by ranges of mobile identification numbers.

4. (Currently Amended) The method of claim 1 wherein performing a lookup in an address translation database includes performing a lookup in a first database indexed by single of mobile identification numbers using the originating MIN of the originating handset extracted from the MAP portion of the message and in response to failing to locate the address in the first database, performing a lookup in a second database using an entity address extracted from the signaling connection control part of the message.
5. (Currently Amended) The method of claim 4 wherein the entity address extracted from the signaling connection control part of the message corresponds to an entity address programmed into ~~a mobile~~ the originating handset.
6. (Original) The method of claim 1 wherein receiving a message includes receiving a short message service message from a mobile switching center.
7. (Original) The method of claim 6 wherein receiving a short message service message includes receiving a short message service message at a signal transfer point or signaling gateway.
8. (Original) The method of claim 1 wherein routing the message based on the address includes routing the message to an interworking mobile switching center (IWMSC) associated with the one SMSC.
9. (Currently Amended) A flexible routing node comprising:
  - (a) a communication module for receiving signaling messages, determining whether the messages require signaling connection control part (SCCP) processing, and, in response to determining that the messages require SCCP processing, internally routing the messages; and

- (b) a processing module for receiving the signaling messages that require SCCP processing, extracting ~~originating~~ mobile identification numbers of originating handsets from mobile application part portions of the messages, and performing address translations for the ~~originating~~ messages based on the mobile identification numbers of the originating handsets.
10. (Original) The flexible routing node of claim 9 wherein the processing module includes an entity type table for determining an entity type for the signaling messages that require SCCP processing.
11. (Original) The flexible routing node of claim 10 wherein the entity type table includes entries for mapping subsystem number values to entity type identifiers.
12. (Original) The flexible routing node of claim 11 wherein the entity type table includes a first entry for mapping a subsystem number value to an SMSC entity type.
13. (Original) The flexible routing node of claim 12 wherein the first entry maps the subsystem number value of 8 to an SMSC entity type.
14. (Currently Amended) The flexible routing node of claim 12 wherein the processing module is adapted to perform the address translations based on the ~~originating~~ mobile identification numbers of the originating handsets extracted from the MAP portions of the messages for messages having an entity type of SMSC.
15. (Currently Amended) The method of claim 1 wherein performing a lookup in an address translation database using the ~~originating~~ mobile identification number of

the originating handset includes performing a lookup in an address translation database indexed by individual mobile identification numbers and, in response to failing to locate the address, performing a lookup in a range-based database using an entity address in a called party address field of an SCCP portion of the message.

16. (Previously Presented) The method of claim 15 wherein at least one entry in the address translation database is indexed by a mobile identification number that is outside of mobile identification number ranges by which the entries in the range-based database are indexed.
17. (Previously Presented) The method of claim 1 comprising, in response to locating the address, inserting an entity address of a destination SMSC in the called party address field of the message.
18. (Currently Amended) The flexible routing node of claim 9 wherein the signaling messages that require SCCP processing include at least one short message service message and wherein the processing module is adapted to route the at least one short message service message to a short message service center corresponding to the originating mobile identification number of the originating handset extracted from the mobile application part portion of the at least one short message service message.
19. (Currently Amended) The flexible routing node of claim 9 comprising a first database indexed by individual mobile identification numbers and a second database indexed by ranges of mobile identification numbers, wherein the processing module is adapted to perform a lookup in the first database using the

~~originating~~ mobile identification number of the originating handset from a MAP portion of one of the messages that require SCCP processing, and in response to failing to locate a matching entry in the first database, the processing module is adapted to perform a lookup in the second database using an SMSC entity address extracted from an SCCP portion of the one message.

20. (Previously Presented) The flexible routing node of claim 19 wherein at least one entry in the first database is indexed by a mobile identification number that is outside of mobile identification number ranges by which entries in the second database are indexed.
21. (Previously Presented) The flexible routing node of claim 9 wherein the communication module and the processing module are components of a signal transfer point (STP).
22. (Previously Presented) The flexible routing node of claim 9 wherein, in performing each address translation, the processing module is adapted to write an entity address of a destination short message service center in a called party address field of each message.
23. (Previously Presented) A network element for routing a data packet through a communications network, the network element comprising:
  - (a) a communication module capable of transmitting a data packet to and receiving the data packet from a communications network;
  - (b) a range-based database containing first packet routing rule records wherein each first packet routing rule record is indexed by a range or block of identification numbers; and

- (c) an exception-based database containing second packet routing rule records wherein each second packet routing rule record is indexed by a single identification number, wherein at least one of the second packet routing rule records is indexed by a single identification number that is an exception to the ranges or blocks of identification numbers by which the first packet routing rule records are indexed, wherein the network element is adapted to perform a lookup in the exception-based database using a mobile identification number (MIN) extracted from a mobile application part (MAP) of a signaling message, and, in response to failing to locate a matching record, the network element is adapted to perform a lookup in the range-based database using an entity address extracted from a signaling connection control part (SCCP) of the signaling message.
24. (Currently Amended) A method for routing short message service (SMS) messages, the method comprising:
- (a) receiving an SMS message from a mobile switching center, the SMS message having a signaling connection control part (SCCP) including a called party address field storing an entity address of a first short message service center (SMSC) and a mobile application part (MAP) storing a mobile identification number (MIN);
  - (b) performing a first lookup based on the MIN extracted from the MAP of the SMS message;
  - (c) in response to locating a matching entry in the first lookup, extracting an entity address associated with a second SMSC from the matching entry,

inserting the entity address associated with the second SMSC in the SCCP called party address field of the SMS message and, routing the SMS message to the second SMSC using routing information from the matching entry;

- (d) in response to failing to locate a matching entry in the first lookup, performing a second lookup using the SMSC entity address of the first SMSC ~~stored~~ stored in the SCCP called party address field of the SMS message; and
  - (e) in response to locating a matching entry in the second lookup, routing the SMS message to the first SMSC.
25. (New) The network element of claim 23 wherein the MIN comprises a MIN of an originating handset.
26. (New) The method of claim 24 wherein the MIN comprises a MIN of an originating handset.